# Classical or "robust" Linear Regression?

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**Abstract**
Mathematical processing of the data in Classical Linear Regression Analysis (Least Squares Method) is compared with more "robust" linear approaches, e.g. the Standardized Principal Components Method and the Regression Method according to Passing & Bablok (Passing-Bablok Regression, 1983).
By "*robust approaches*" we understand such computational methods, where there is not possible (or advantageous) to make a distinction between "independent" and "dependent" variables. These are fundamentally undistinguishable as a choice and their uncertainities are of a similar order of magnitude. Typically, such is the case of comparison of the data of e.g. two analytical (instrumental) procedures in chemistry. The use of the often applied Least Square Method (LSM) is in such instance inappropriate. In the LSM it is implicitly assumed that the variables have inherently different uncertainity and therefore are not mutually exchangeable.
A comparison between the 3 approaches is presented in a graphical form and open for further discussion.